United States Department of the Interior

FISH AND WILDLIFE SERVICE

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July 15, 2020

In Reply Refer To:
FWS/R2/ES/02ENNM00-2020-F-0833

Memorandum

To: Cliff Schleusner, Chief, Division of Wildlife and Sport Restoration Program, U.S. Fish and Wildlife Service, Southwest Region 2, Albuquerque, New Mexico

From: Charles L. Hayes, Acting Field Supervisor, New Mexico Ecological Services Field Office, U.S. Fish and Wildlife Service, Southwest Region 2, Albuquerque, New Mexico

CHARLES HAYES Digitally signed by CHARLES HAYES
Date: 2020.07.15 13:32:48 -06'00'

Subject: Streamlined Biological Opinion for the State Wildlife Grant Proposal for Northern Mexican and Narrow-Headed Gartersnakes Surveys

This memorandum transmits the New Mexico Ecological Services Field Office biological opinion based on our review of the June 16, 2020, Intra-Service Section 7 Biological Evaluation (BE) for the State Wildlife Grant (funded through the Wildlife Sport Fish Restoration Program) proposal to conduct Northern Mexican (*Thamnophis eques megalops*) and narrow-headed (*Thamnophis rufipunctatus*) gartersnake surveys located on the New Mexico Department of Game and Fish Double E Ranch in Grant County, New Mexico, and in Diamond Creek in Catron County, New Mexico. The BE analyzed the effects to threatened and endangered species from the issuance of the grant, as well as surveying, capturing, and handling threatened and endangered species that will result from the issuance of the grant. In the BE, the Wildlife Sport Fish Restoration Program made an effects determination for the proposed action of "may affect, not likely to adversely affect" for the threatened Mexican spotted owl (*Strix occidentalis lucida*) and its designated critical habitat, endangered southwestern willow flycatcher (*Empidonax traillii extimus*) and its designated critical habitat, threatened yellow-billed cuckoo (*Coccyzus americanus*) and its proposed critical habitat, Chiricahua leopard frog (*Lithobates chiricahuensis*), endangered Gila chub (*Gila intermedia*) and its designated critical habitat, endangered Gila topminnow (*Poeciliopsis occidentalis*), threatened Gila trout (*Oncorhynchus gilae*), endangered loach minnow (*Tiaroga cobitis*) and designated critical habitat, and endangered spikedace (*Meda fulgida*) and its critical habitat, and a "may affect, likely to

adversely affect" for the Northern Mexican gartersnake and narrow-headed gartersnake and its proposed critical habitat. There is no proposed critical habitat for either of the gartersnakes on the Double E Ranch, but proposed critical habitat does occur for the narrow-headed gartersnake in Diamond Creek.

The enclosed biological opinion is based on information provided in the June 16, 2020, BE and other sources of information and was completed pursuant to the November 16, 2016, U.S. Fish and Wildlife Service policy on *Streamlined Consultation Guidance for Restoration/Recovery Projects* and associated documents.

Thank you for your concern for threatened and endangered species and New Mexico's wildlife resources. If you have any questions, please contact Clinton Smith of my staff at the letterhead address, by phone at (505) 761-4743, or by electronic mail at clinton_smith@fws.gov.

cc:
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Director, New Mexico Energy, Minerals, and Natural Resources Department, Forestry Division, Santa Fe, New Mexico
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STREAMLINED BIOLOGICAL OPINION FOR RESTORATION/RECOVERY PROJECTS FOR THE STATE WILDLIFE GRANT PROPOSAL TO CONDUCT NORTHERN MEXICAN AND NARROW-HEADED GARTERSNAKE SURVEYS

2020-F-0833

July 2020

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Charles L. Hayes Date
Acting Field Supervisor
New Mexico Ecological Services Field Office

BIOLOGICAL OPINION

I. Description of the Proposed Action

A. Description of the Restoration/Recovery Objective(s)

1. The Southwest Region 2 Division of Wildlife and Sport Fish Restoration Program (WSFR) is working to provide the New Mexico Department of Game and Fish (Department) with a State Wildlife Grant to conduct Northern Mexican (*Thamnophis eques megalops*) and narrow-headed (*Thamnophis rufipunctatus*) gartersnake (hereafter "gartersnakes") surveys. The Department is proposing to survey for gartersnakes on the Double E Ranch (Ranch) in Grant County, New Mexico, and in Diamond Creek in Catron County, New Mexico. Surveys for gartersnakes will consist of Gee minnow traps (traps) and visual encounter surveys (VES). Additionally, individual gartersnakes may (and sometimes will) be captured in traps and during VES to obtain biological and disease data.
2. There are no anticipated habitat improvements associated from funding this grant. By funding this grant, WSFR will help with increasing biological, locality, habitat, disease and nonnative species distribution information on the Ranch and in Diamond Creek. This information will also be useful for the gartersnakes Species Status Assessments (SSA) and Recovery Plans (RP) that are marked for completion in 2021 and 2022.
3. Both traps and VES have been used to sample gartersnakes successfully in Arizona and New Mexico (Holycross et. al. 2006, Christman and Jennings 2019).
4. It is anticipated that within one to two years the biological, locality, habitat, disease and nonnative species distribution information will be used for the gartersnakes SSAs and RPs. Additionally, this information can be used for gartersnakes conservation and habitat management on the Ranch.

B. Define the Action Area

The Proposed Action will take place on the Ranch and in Diamond Creek. The Ranch is a 5,828-acre (2,359 hectare) property that was purchased in 2014 by the Department. The Ranch is located approximately 16 miles (27 kilometers) northwest of Silver City, New Mexico, and 5 miles (8 kilometers) east of Gila, New Mexico, in the north central portion of Grant County (NMDGF 2017). The Ranch includes 3 miles (5 kilometers) of Bear Creek, a tributary of the Gila River. On the Ranch, Bear Creek has sections that are perennial; however, surface flow in much of the canyon can be intermittent. The aquatic areas of Bear Creek would be the focus for gartersnakes survey efforts. Gartersnakes survey typically occur from May through September (Nowak 2013).

Department personnel will also survey Diamond Creek in Catron County, New Mexico. Diamond Creek was one of five remaining narrow-headed gartersnake populations where the species could reliably be found in 2011 (Service 2014). Based on the most recent capture rates and survey results from Diamond Creek, the narrow-headed gartersnake population there may be in a potentially sharp decline (GCWG 2016).

C. Description of How the Project Will Be Implemented

The Southwest Region 2 WSFR is working to provide the Department with a State Wildlife Grant to conduct gartersnake surveys. As part of the Proposed Action, traps will be set to help capture gartersnakes (juveniles and adults), and determine the presence of fish species, aquatic insects, and any nonnative aquatic species. Typically, traps are set in the morning and run from two to four nights, with traps being checked at least once or twice daily for gartersnake presence (Nowark 2013). Additionally, there will be limited disturbance of habitat through VES. The VES are inherently low-disturbance activities, where surveyors proceed cautiously and quietly while continuously checking for wildlife activity to avoid and minimize disturbance to species of interest in order to maximize detection probability. Lastly, individual gartersnakes will be captured in traps or during VES and directly handled to obtain biological or disease data.

D. Conservation Measures

Department personnel will limit handling by minimizing the amount of time necessary for processing and then promptly releasing gartersnakes at their original localities. Department personnel will also abide by biosecurity protocols to prevent disease transmission. Additionally, all Department personnel will be listed under the Department's Federal Recovery Permit to survey and handle both gartersnake species. These personnel have received the required Northern Mexican and narrow-headed gartersnakes training and will follow all protocols identified during the training.

Department personnel will minimize disturbance during VES by keeping vehicles out of habitats (i.e., no off-road driving will occur) and by hiking in to survey areas.

Department personnel will continuously check for wildlife activity if walking through proposed critical habitat areas. They will also minimize understory vegetation destruction and no paths will be created to avoid disturbance to habitat structure.

E. Monitoring and Reporting Plan

There is no reporting requirement specific to this grant. The Department has annual reporting requirement stipulated in their Federal Recovery Permit in regards to Northern Mexican and narrow-headed gartersnakes.

II. Status of the Species and Critical Habitat in the Action Area- Environmental Baseline

SPECIES	LISTING STATUS
Northern Mexican gartersnake (*Thamnophis eques megalops*)	Threatened
Narrow-headed gartersnake (*Thamnophis rufipuncatus*)	Threatened

A. Northern Mexican gartersnake

The northern Mexican gartersnake was historically found within nearly every major watershed in Arizona (with the exception of the Little Colorado River watershed) and southwestern New Mexico including the Colorado, Verde, Salt, San Pedro, and Gila watersheds, extending south along the Mexican Plateau to near Mexico City. Recent sampling data suggest that perhaps only four populations of northern Mexican gartersnakes in the United States are considered relatively dense where the species remains somewhat reliably detected: 1) upper Santa Cruz River in the San Rafael Valley; 2) lower Tonto Creek; 3) Verde Valley; and 4) the Aquatic Research and Conservation Center (formerly known as the Page Springs and Bubbling Ponds State Fish Hatcheries) adjacent to Oak Creek.

Throughout its rangewide distribution, the northern Mexican gartersnake occurs at elevations from 140 to 8,497 feet (43 to 2,590 meters) within a wide variety of biotic communities including Sonoran Desertscrub through Semidesert Grassland, Interior Chaparral, Madrean Evergreen Woodland, into the lower reaches of Petran Montane Conifer Forest (Rossman *et al.* 1996, Brennan and Holycross 2006). Considered a "terrestrial-aquatic generalist" by Drummond and Marcías-García (1983), the northern Mexican gartersnake is often found in riparian habitat, but also may spend time in terrestrial habitat removed from water (Nowak 2013). Aquatic habitat is used for prey acquisition and can be either lentic (stock tanks, ponds, ciénegas, etc.) or lotic (low-gradient streams). Aquatic edge habitat is frequently used, followed by terrestrial habitat (for thermoregulatory purposes such as gestation and periods of dormancy) and developed areas, with snakes documented using artificial, human-created objects as surface cover (Boyarski *et al.* 2015).

Foraging behavior of northern Mexican gartersnakes includes moving along vegetated shorelines, searching for prey in water and on land, using different strategies. Primarily, its diet consists of amphibians and fishes, such as adult and larval (tadpoles) native leopard frogs, as well as juvenile and adult native fish (Rosen and Schwalbe 1988), but earthworms, leeches, lizards, and small mammals are also taken. In situations where native prey species are rare or absent, the gartersnake's diet may include nonnative species, including larval and juvenile bullfrogs, western mosquitofish (Holycross *et al.* 2006, Emmons and Nowak 2013, Boyarski *et al*. 2019), or other nonnative fishes. In some cases where the aquatic community is nearly wholly nonnative, small size classes of predatory nonnative species (excluding crayfish) substitute native prey within the prey community (Emmons *et al.* 2016) until individuals grow out of these small size classes and can become highly predatory on gartersnakes themselves.

Northern Mexican gartersnakes could be visible on the surface any day of the year if the preceding evening is above freezing (Emmons 2016). Longevity in the wild was estimated to be at least 10-11 years by Boyarski *et al*. (2019). Sexual maturity in northern Mexican gartersnakes occurs at two years of age in males and at two to three years of age in females (Rosen and Schwalbe 1988). Mating has been documented in April and May followed by the live birth of between 7 and 38 newborns from June through September (Rosen and Schwalbe 1988, Degenhardt et al. 1996, Nowak and Boyarski 2012, Cobbold 2018). A staggered or biennial reproductive strategy is believed to be used by northern Mexican gartersnakes (Rosen and Schwalbe 1988, Boyarski *et al*. 2019).

B. Narrow-headed gartersnake

The historical distribution of the narrow-headed gartersnake ranged across the Mogollon Rim and along associated perennial stream drainages from central and eastern Arizona, southeast to southwestern New Mexico at elevations ranging from 2,300 to 8,000 feet (700 to 2,430 meters) (Rosen and Schwalbe 1988, Rossman *et al.* 1996, Holycross *et al.* 2006). Gartersnakes were historically distributed in headwater streams of the Gila River subbasin that drain the Mogollon Rim and White Mountains in Arizona, and the Gila Wilderness in New Mexico. Major subbasins in its historical distribution included the Salt and Verde River subbasins in Arizona, and the San Francisco and Gila River subbasins in New Mexico (Holycross *et al.* 2006). Holycross *et al.* (2006) suspect the species was likely not historically present in the lowest reaches of the Salt, Verde, and Gila Rivers, even where perennial flow persists. Existing sampling data suggest that perhaps only three populations of narrow-headed gartersnakes are considered relatively dense where the species remains somewhat reliably detected: 1) Tularosa River (New Mexico); 2) Middle Fork Gila River (New Mexico); and 3) Oak Creek/ West Fork Oak Creek (Arizona).

This species is strongly associated with clear, rocky, often perennial streams, using predominantly pool and riffle habitat that includes cobbles and boulders (Rosen and Schwalbe 1988, Degenhardt *et al.* 1996, Rossman *et al.* 1996, Nowak and Santana-Bendix 2002, Ernst and Ernst 2003). Narrow-headed gartersnakes have also been documented using isolated pools within intermittent streams as foraging habitat (Cotton et al. 2017) and have been observed using reservoir shoreline habitat in New Mexico (Fleharty 1967, Rossman et al. 1996, Hellekson 2012). Narrow-headed gartersnakes found in water represented less than 10 percent of total observations according to a multi-year telemetry study in New Mexico (Jennings and Christman 2012) which suggests that this species may spend a relatively small percentage of its time in the water.

Narrow-headed gartersnakes also use terrestrial, upland habitat and a variety of organic and inorganic cover for their thermoregulatory needs such as for shelter during periods of cold-season dormancy, basking in gestation of young in pregnant females, facilitating digestion, healing from injury or illness, and to escape flood events. In New Mexico, narrow-headed gartersnakes were observed using cover objects consisting of rocks, earthen burrows, debris pile, stumps/logs and vegetation when not observed in the water or on the ground surface (Jennings and Christman 2012). Narrow-headed gartersnakes eat fish (Rosen and Schwalbe 1988, Degenhardt *et al.* 1996, Rossman *et al.* 1996, Nowak and Santana-Bendix 2002, Nowak 2006, Jennings and Christman 2012), and are considered specialists in this regard. This species is an underwater ambush hunter, believed to be heavily dependent on visual cues when foraging (de Queiroz 2003, Hibbitts and Fitzgerald 2005). Therefore, sediment and turbidity levels within the water column may affect foraging success. Native fish species considered as prey for the narrow-headed gartersnake include Sonora sucker (*Catostomus insignis*), desert sucker (*C. clarki*), speckled dace (*Rhinichthys osculus*), roundtail chub (*Gila robusta*), Gila chub (*G. intermedia*), and headwater chub (*G. nigra*) (Rosen and Schwalbe 1988, Degenhardt *et al.* 1996) but all native fish species of the appropriate size class are expected as prey. Nonnative predatory fish species in their fingerling size classes are also used as prey by narrow-headed gartersnakes, including brown trout (*Salmo trutta*) (Rosen and Schwalbe 1988, Nowak and Santana-Bendix 2002, Nowak 2006), green sunfish (*Lepomis cyanellus*) (Fleharty 1967), smallmouth bass (*Micropterus dolomieu*) (Lopez

2010), and rock bass (*Ambloplites rupestris*) (Wilcox 2015). Nonnative fish with spiny dorsal fins are not generally considered suitable prey items due to the risk of injury to the gartersnake during ingestion and because of where they tend to occur in the water column (Nowak and Santana-Bendix 2002).

Growth rates of wild narrow-headed gartersnakes can be significant; indicating that growth to maturity may be achieved over a relatively short period of time, perhaps as short as 2 years of age (Jennings and Christman 2012). Females give birth to 4 to 17 offspring from early- to mid-July (Jennings and Christman 2012) into early August, perhaps earlier at lower elevations (Rosen and Schwalbe 1988). Longevity in this species may be as long as 10 years in the wild (Rosen and Schwalbe 1988).

C. Narrow-headed gartersnake Critical Habitat

Critical habitat was proposed on July 10, 2013 (Service 2013), and later revised and re-proposed on April 28, 2020 (Service 2020), but has not yet been designated. The revised critical habitat for the narrow-headed gartersnake has been proposed in eight units in portions of Arizona and New Mexico totaling 18,701 acres (7,568 hectare; Service 2020). The features that support the life-history needs of the species called Physical and Biological Features (PBFs) are listed below.

1. Perennial streams or spatially intermittent streams that provide both aquatic and terrestrial habitat that allows for immigration, emigration, and maintenance of population connectivity of narrow-headed gartersnakes and contain:
   (A) Pools, riffles, and cobble and boulder substrate, with low amount of fine sediment and substrate embeddedness;
   (B) Organic and natural inorganic structural features (e.g., cobble bars, rock piles, large boulders, logs or stumps, aquatic and wetland vegetation, logs, and debris jams) in the stream channel for basking, thermoregulation, shelter, prey base maintenance, and protection from predators;
   (C) Water quality that is absent of pollutants or, if pollutants are present, at levels low enough such that recruitment of narrow-headed gartersnakes is not inhibited; and
   (D) Terrestrial habitat within 89 feet (27 meters) of the active stream channel that includes boulder fields, rocks, and rock structures containing cracks and crevices, small mammal burrows, downed woody debris, and vegetation for thermoregulation, shelter sites, and protection from predators.
2. Hydrologic processes that maintain aquatic and riparian habitat through:
   (A) A natural flow regime that allows for periodic flooding, or if flows are modified or regulated, a flow regime that allows for the movement of water, sediment, nutrients, and debris through the stream network, as well as maintenance of native fish populations; and
   (B) Physical hydrologic and geomorphic connection between the active stream channel and its adjacent terrestrial areas.
3. Prey base of native fishes, or soft-rayed, nonnative fish species.
4. An absence of nonnative predators, such as fish species of the families Centrarchidae and Ictaluridae, bullfrogs, and crayfish, or occurrence of nonnative predators at low enough densities such that recruitment of narrow-headed gartersnakes is not inhibited and maintenance of viable prey populations is still occurring.

5. Elevations of 2,300 to 8,200 feet (700 to 2,500 meters).

Environmental Baseline for Species

The Proposed Action will take place on the Double E Ranch. The Ranch includes 3 miles (5 kilometers) of Bear Creek, a tributary of the Gila River (NMDGF 2017). On the Ranch, Bear Creek has sections that are perennial; however, surface flow in much of the canyon can be intermittent. There have been no reports of gartersnakes during aquatic habitat surveys during the last few years (NMDGF 2017; Christman and Jennings 2018, 2019). Beaver Creek on the Ranch is not within proposed critical habitat for either gartersnake species (Service 2020).

The action area also includes Diamond Creek which is within the Gila River Subbasin Unit, located in southwestern New Mexico, east of Glenwood, and west and north of Silver City in Grant and Hidalgo Counties, New Mexico. This unit consists of 5,429 acres (2.197 hectares) in 8 subunits along 104 stream miles (167 kilometers) which includes the 6 stream miles (10 kilometers) of Diamond Creek. The Diamond Creek subunit has PBFs 1, 2, 3, and 5, but PBF 4 is in a degraded condition (Service 2020). Surveys conducted in 2016 had three gartersnake captures but no other current records are known from this area (GCWG 2016).

III. Effects of the Action on Species, Critical Habitat, and Cumulative Effects

A. Northern Mexican and narrow-headed gartersnakes

1. Adverse impacts to gartersnakes from traps, VES, and direct handling are likely small in magnitude, temporary or short-term, and geographically local with respect to each local population. Direct effects including trampling juveniles, or adults, will likely be minimized due to the proposed action and conservation measures. There have been no reported captures of gartersnakes on the Ranch and number of narrow-headed gartersnakes are potentially declining in Diamond Creek. Adverse impacts could result in lower population numbers if gartersnakes are killed due to proposed action.
2. Indirect effects from the Proposed Action may include destruction or degradation of breeding and foraging habitat resulting in reduced reproductive success and survival of young. This could lead to reduced recruitment and population decline. However, the Department's conservation measures should minimize destruction or degradation of breeding and foraging habitat and thus not effect reproductive success or survival of young.
3. The action is not likely to cause a permanent loss of habitat or a permanent loss of habitat function.
4. The proposed action includes traps, VES, and direct handling of gartersnakes. The survey information from the Department can lead to increased biological knowledge of the species, locality, habitat, and disease information, and nonnative species presence (effects from nonnative species presence and abundance is a PBF for both gartersnakes proposed critical habitat; Service 2020) on the Ranch and in Diamond Creek. This information will also be useful for the gartersnakes SSA and RP that are marked for completion in 2021 and 2022.

5. Cumulative effects that could occur on the Ranch and Diamond Creek include increased habitat restoration for gartersnakes, which could lead to increases in the population on the Ranch and in Diamond Creek.

B. Narrow-headed gartersnake Proposed Critical Habitat

1. Adverse impacts to narrow-headed gartersnake proposed critical habitat caused by the proposed action to essential habitat features or PBFs are likely to be small in magnitude, temporary (meaning not continuous, recurring, or chronic), short-term, and geographically local with respect to Diamond Creek.
2. Adverse impacts caused by the proposed action are not likely to result in a permanent loss of habitat or degrade the conservation support function of affected proposed critical habitat in Diamond Creek. Additionally, the Department's conservation measures should minimize destruction or degradation of proposed critical habitat and thus not affect the proposed critical habitat conservation support function.
3. Cumulative effects that could occur in Diamond Creek include increased habitat restoration for gartersnakes, which could lead to increases in the population in this area.

IV. Conclusion

After reviewing the current status of the Northern Mexican gartersnake, narrow-headed gartersnake and its proposed critical habitat, the environmental baseline for the action area, the effects of the proposed action and cumulative effects, it is the Service's biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the Northern Mexican and narrow-headed gartersnakes, and it not likely to destroy or adversely modify proposed critical habitat for the narrow-headed gartersnake, and will result in a net conservation benefit to both species.

The Service reached this/these conclusion(s) because:

A. The primary purpose of the proposed action is to conserve both gartersnakes;
B. The proposed action was developed in coordination with the Service for that purpose;
C. The proposed action gives full consideration to, and is consistent with, the survival and recovery needs of gartersnakes and the role of the action area in providing for those needs;
D. The proposed action gives full consideration to, and is consistent with, the recovery support function of critical habitat for the narrow-headed gartersnake and the role of the action area in providing for that function;
E. There is either a proven track record for successful implementation of the proposed action, or there is a high level of certainty that the proposed action is likely to produce a beneficial impact for gartersnakes.
F. Adverse impacts (including those that conform to incidental take) are likely to be small in magnitude, temporary (meaning not continuous, recurring, or chronic), short-term and geographically local with respect to each local population being addressed.
G. The amount or extent of incidental take of gartersnakes is likely to be low, and is not likely to have adverse population-level impacts to gartersnakes.

H. The proposed action is not likely to cause a permanent net loss of habitat, net loss of habitat function, net loss of critical habitat or a net loss of functional value of critical habitat.

V. Incidental Take Statement

For proposed actions that are in accordance with an active cooperative agreement and are in furtherance with the Endangered Species Act (ESA), threatened species take covered under that cooperative agreement is authorized under 50 CFR 17.31(b). Although take for the proposed action is authorized under 50 CFR 17.31(b), WSFR is still required to complete formal consultation to ensure their proposed action will not jeopardize the threatened species' continued existence.

The New Mexico Ecological Services Field Office (NMESFO) anticipates no juvenile or adult gartersnakes will be killed as a result of the proposed action. However, all captured juvenile or adult gartersnakes are anticipated to be harassed as a result of this proposed action. Harassment is expected to occur due to traps, VES, and direct handling. If one juvenile or adult gartersnake dies from the proposed actions then take will be considered exceeded and WSFR will coordinate with the NMESFO before activities are allowed to resume.

Effects of the Take

In the accompanying biological opinion, we have determined that the level of anticipated take is not likely to result in jeopardy to the gartersnakes. Although we anticipate some incidental take to occur; the proposed action is in furtherance of the ESA and should ultimately result in a benefit for the species.

Reasonable and Prudent Measures and Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the ESA, WSFR must comply with the following nondiscretionary reasonable and prudent measure, which outlines reporting/monitoring requirements, to minimize impacts of incidental take of gartersnakes:

1. WSFR must report any mortalities of juveniles or adult gartersnakes to the NMESFO within 48 hours.

No additional terms and conditions are considered necessary to carry out the reasonable and prudent measure.

VI. Reinitiation Notice

This concludes formal consultation on the proposed State Wildlife Grant for Northern Mexican and Narrow-Headed Gartersnakes Surveys. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1)

the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

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